

REMARKS

Reconsideration of this application as amended is respectfully requested.

In the Office Action, claims 128-141 and 147-149 are pending and rejected.

In this response, no claim has been canceled. Claims 128, 133, 136, 137 and 148 have been amended and no new claim has been added. Thus, claims 128-141 and 147-149 remain pending.

Drawing Rejections

As required by the Office Action, formal drawings are supplied with this Amendment.

Rejections under 35 U.S.C. § 102

Claims 128-141 and 147-149 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,620,057 to Pirritano, et al. (“Pirritano”).

Independent claims 128, 136, and 148

Independent claim 128 contains the limitation “... a spherical material having an outer spherical surface and having a first void recessed below the outer spherical surface and a second void recessed below the outer spherical surface of said spherical material ...” (Emphasis added).

Independent claim 136 contains the limitation “... a spherical material having a first void on an outer surface of said spherical material; a first semiconductor having at least a portion disposed within said first void; and an adhesive material between the spherical material at a base of said first void and said first semiconductor.” (Emphasis added).

Independent claim 148 contains the limitation “... a spherical material having a first void on an outer surface of said spherical material; a first electrical component having at least a portion disposed within said first void; and an adhesive material between the spherical material at

a base of said first void and said first electrical component.” (Emphasis added).

Pirritano describes a system for locating golf balls. Pirritano discloses a golf ball that incorporates an array of passive transponders and a RF transmitter/receiver capable of energizing the passive transponder array and of detecting a signal emitted by the array (Abstract). Each of the transponders is in the form of flat-loop inductors, feature 33, as shown in Figures 2, 3 and 4. Each of the transponders is positioned between the core and the cover and is surrounded by the material used to make the cover, but no void, which is recessed below an outer spherical surface, is described in the specification or observed in Figures 2-4. In fact, Figures 2-4 and col. 5, lines 12-15 and 21-22, and col. 11, lines 5-7 of Pirritano, as cited by the Office Action on page 3, do not explicitly disclose a spherical material having any void on an outer spherical surface. Further, Pirritano fails to describe having a semiconductor or an electrical component disposed within a void on the outer surface of the spherical material. Therefore Pirritano fails to anticipate all the limitations in claims 128, 136 and 148.

Claim 128 requires a void recessed below the outer spherical surface of the spherical material; Pirritano fails to disclose this limitation. Claim 128 also requires that the two voids be at the two poles of an axis and this limitation is also not disclosed in Pirritano. Pirritano shows (and claims) three loop inductors at 90° relative to each other (see claim 1 and Figure 2 of Pirritano) so there is no possibility of the configuration suggested by the Examiner. This teaching of a 90° configuration (for each of the loops relative to the other 2 loops) for three loops prevents any of two loops in this configuration from being in a 180° configuration. In other words, the Examiner’s interpretation of the positioning of the loop inductors is based purely on hindsight with no basis in Pirritano. Hence claim 128 is also not anticipated for this reason.

The circular area in the center of the circular flat-loop inductor of Pirritano is not actually a void in ball material but an area in the circular configuration of the loop inductor. The

Applicants' application outlines two voids deliberately placed on an axis of the outer spherical surface of a ball's core or mantle and these voids exist in the spherical material in order to receive electrical components.

In Pirritano, there is no void created in the core in advance of attaching this flat-loop inductor to the golf ball core. The flat-loop inductor is applied on the core and it rests **above** the surface of the core (see col. 15, lines 43-44 of Pirritano).

Claim 136 requires a first semiconductor having at least a portion disposed within a first void on an outer surface of a spherical material and an adhesive material between the spherical material at the base of the first void and the first semiconductor. There is simply no disclosure in Pirritano of such a semiconductor or such an adhesive. There is no need for a semiconductor in Pirritano's loop circuit; the circuit is designed to operate without a semiconductor component, such as a diode or an RFID circuit. Further, the addition of such a semiconductor component would destroy the functionality of Pirritano's loop circuit which is designed to operate without such semiconductor components over a long range (300 feet; see col. 11, line 16). The use of a semiconductor component in a long range application would require batteries in the ball for the components. This is not an obvious modification. Hence, it would not be obvious to modify Pirritano to include a semiconductor component. Hence, for at least this reason, claim 136 is not anticipated by and is not obvious in view of Pirritano.

Claim 148 requires a first electrical component having at least a portion disposed within a first void on an outer surface of a spherical material and an adhesive material between the spherical material at the base of the first void and the first electrical component. Pirritano does not describe or suggest any such electrical component in such a void and does not describe such an adhesive and hence Pirritano cannot anticipate claim 148. As noted above, the addition of an electrical component in Pirritano's loop inductor would destroy the functionality of Pirritano's

loop inductor and would not provide the desired range of detectability (300 feet; see col. 11, line 16) without a power source in the ball, and hence claim 148 is not obvious in view of Pirritano.

For at least the reasons set forth above, Applicants respectfully submit that claims 128, 136 and 148 are not anticipated by Pirritano and respectfully request the withdrawal of the claim rejections.

Dependent claims 129-135 and 137-141, 147 and 149

Claims 129-135 and 137-141, 147 and 149 depend from independent claims 128, 136 and 148 and thus incorporate all the limitations contained therein. For at least this reason, Applicants respectfully submit that all the limitations in claims 129-141, 147 and 149 are not anticipated by Pirritano and respectfully request the withdrawal of the rejections.

Rejections under 35 U.S.C. § 103

Claims 130-131 are rejected under 35 U.S.C. §103(a) as being unpatentable over Pirritano.

Dependent claims 130-141, and 149

Dependent claims 130-135 and 137-141 and 149 depend from independent claims 128, 136 and 148 and thus incorporate all the limitations contained therein. Pirritano, as described above, fails to anticipate these independent claims and fails to render the independent claims obvious, and therefore Pirritano does not constitute a *prima facia* obviousness rejection of the dependent claims.

For at least the reasons set forth above, and since claims 130-135 and 137-141 and 149 depend from claims 128, 136 and 148 and incorporate the limitations contained therein, Applicants respectfully submit that claims 130-135 and 137-141 and 149 are not obvious in view

of Pirritano and respectfully request the withdrawal of the rejections.

Pirritano describes that the golf ball cover provides the durability of the ball. Applicants describe that to achieve the necessary ball durability, several approaches are useful. These include pre-forming voids, disposing the electrical component inside the void, using adhesive to secure the component in the void, and use of elastic conductive ink, which flexes with the forces applied to the ball. The Applicants determined that the electrical component can be displaced and disconnected from the circuit under typical golf ball forces if it is not disposed inside a void and secured with adhesive. The Applicants further determined that metallic foil (e.g. copper) does not provide the durability required, as metallic foil deforms and breaks under typical golf ball forces.

Conclusion

In view of the foregoing, Applicants respectfully submit that the present application is now in condition for allowance. If the Examiner believes a telephone conference would expedite or assist in the allowance of the present application, the Examiner is invited to call the undersigned attorney at (408) 720-8300.

Please charge Deposit Account No. 02-2666 for any fees which may be due in connection with this response.

Respectfully submitted,

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Date: Aug. 20, 2007



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